

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Petitions Regarding the Use of Signal Boosters)	WT Docket No. 10-4
and Other Signal Amplification Techniques)	
Used with Wireless Services)	
)	

**COMMENTS OF THE DAS FORUM (A MEMBERSHIP SECTION OF PCIA—THE
WIRELESS INFRASTRUCTURE ASSOCIATION)**

I. INTRODUCTION

The DAS Forum (the “Forum”), a membership section of PCIA-The Wireless Infrastructure Association (“PCIA”), hereby submits these comments on the Federal Communications Commission’s (“Commission”) *Public Notice*¹ in the above-captioned proceeding. The DAS Forum membership includes virtually every major neutral host outdoor and indoor distributed antenna system (“DAS”)² provider, as well as manufacturers of equipment used in the wireless service sectors, several commercial mobile radio service (“CMRS”) carriers currently deploying DAS as part of their networks and many wireless industry infrastructure representatives.

¹ Wireless Telecommunications Bureau Seeks Comment on Petitions Regarding the Use of Signal Boosters and Other Signal Amplification Techniques Used with Wireless Services, *Public Notice*, WT Dkt. No. 10-4, DA 10-14 (Jan. 6, 2010).

² DAS is a network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure. DAS antenna elevations are generally at or below the clutter level and node installations are compact. See <http://thedasforum.org/>, last visited Jan. 28, 2009.

As indicated in the DAS Forum’s *Petition for Rulemaking*,³ one of five such petitions for rulemaking or declaratory ruling under consideration in this docket,⁴ the breadth and complexity of issues surrounding wireless signal boosters and other amplification techniques demands a formal rulemaking process. We submit these comments to illustrate how concepts raised in the various petitions can be integrated into the DAS Forum’s proposed industry Code of Conduct in order to mitigate interference yet allow for the full deployment of wireless services.

II. THE COMMISSION SHOULD COMMENCE A FORMAL RULEMAKING THAT DEVELOPS APPROPRIATE RULES AND POLICIES SURROUNDING THE USE AND SALE OF REPEATERS

Over the last five years, five different parties have filed petitions requesting the Commission to clarify its rules on wireless boosters, repeaters, and amplifiers. While the petitions do not all address the exact same subject matter—some are directed to the Commission’s CMRS rules,⁵ while some specifically address the Commission’s Part 90 rules⁶—they all express a great deal of uncertainty with respect to the current rules, particularly as they apply to long-standing industry practices.

The DAS Forum agrees that, in some cases, *e.g.* the Jack Daniel Petition, a declaratory ruling is the appropriate mechanism to explain the Commission’s rules, without changing the rules or their underlying policy.⁷ However, in the case of the CTIA Petition, the DAS Forum

³ Petition for Rulemaking of the DAS Forum (A Membership Section of PCIA—The Wireless Infrastructure Association), WT Dkt. 10-4 (Oct. 23, 2009) (“DAS Forum Petition”).

⁴ Petition for Rulemaking of Bird Technologies Group, WT Dkt. No. 10-4 (Aug. 18, 2005) (“Bird Technologies Petition”); Petition for Declaratory Ruling of CTIA-The Wireless Association, WT Dkt. No. 10-4 (Nov. 2, 2007) (“CTIA Petition”); Petition for Declaratory Ruling of Jack Daniel DBA Jack Daniel Company, WT Dkt. 10-4 (Sep. 25, 2008) (“Jack Daniel Petition”); Petition for Rulemaking of Wilson Electronics, Inc., WT Dkt. 10-4 (Nov. 3, 2009) (“Wilson Petition”).

⁵ See 47 C.F.R. Pts 22, 24 and 27.

⁶ See 47 C.F.R. Pt 90.

⁷ While outside of the scope of the DAS Forum’s petition, the DAS Forum supports Jack Daniel’s general assertion that the FCC should not preempt the development of fire protection codes that require Part 90 Class B boosters for public safety users. As Jack Daniel notes, Class B boosters offer public safety users a cost-effective means of ensuring quality wireless coverage in buildings, which is crucial in emergencies. This too, however, is premised on the fact that such boosters would not cause interference.

believes that a formal rulemaking with appropriate notice and comment procedures is necessary in order for the Commission to adequately consider substantive policy and regulatory changes with regard to the manufacture, sale, installation and operation of wireless boosters and amplifiers. Policy or regulatory changes would not be without impact. Any sea change in the Commission's approach to the sale and installation of booster/repeaters in the CMRS services would impact neutral host DAS providers, equipment manufacturers and retailers, as well as wireless carriers. It is only through the rigors of a rulemaking proceeding that all these interests can be protected.

The CTIA Petition for Declaratory Ruling, while raising important questions, and pointing to issues that require resolution, seeks not only an interpretation of the rules but the adoption of substantive requirements. The DAS Forum believes, for instance, that CTIA's concern about the use of arguably "unauthorized" boosters or repeaters is one issue while its request for a rule change that would require carrier consent before the sale of these devices is quite another.⁸ There is no Commission rule that prohibits the sale of properly certificated equipment. Such a drastic step could not be taken through rule interpretation but would require rulemaking.⁹ Similarly, when CTIA asserts that "[i]f vendors are required to exercise the minimal diligence required to determine that their equipment requires FCC certification, *they should also be required* to inquire whether their clients are eligible to purchase them,"¹⁰ it creates another obligation that would require rulemaking. The DAS Forum therefore urges the Commission to proceed expeditiously in this proceeding by commencing a formal rulemaking process.

⁸ CTIA Petition at 11 ("The use and sale of wireless boosters and repeaters without licensee consent is unauthorized and, hence, prohibited.").

⁹ The DAS forum agrees with Wilson Electronics that "[t]he prohibition that CTIA seeks would constitute a rule. The Commission cannot supply a missing rule by issuing a declaratory ruling." See Wilson Petition at 10-11.

¹⁰ CTIA Petition at 14 (emphasis added).

III. COORDINATION BETWEEN CERTIFIED DEVICE USERS AND SPECTRUM LICENSEES IS EFFECTIVE AT MITIGATING INTERFERENCE AND SHOULD CONSTITUTE LICENSEE CONSENT

The main objective of The DAS Forum is to ensure that certificated repeaters will be operated in such a manner as to avoid harmful interference without unduly restricting the sale and use of professionally installed repeaters; the DAS Forum's Code of Conduct accomplishes both of these goals. (See Appendix A.) As the DAS Forum stated in its petition, because it is both highly impractical and anti-competitive for neutral host providers to coordinate sales and purchases of this equipment with carriers, this coordination is done when the system is made operational.¹¹ In practice and experience, members of the DAS Forum have successfully avoided interference issues in this manner and the proposed Code of Conduct would merely formalize the coordination process already in place for DAS providers.

The concepts of the Bird Technologies and Jack Daniel petitions are substantially similar to The DAS Forum's Code of Conduct proposal. They recommend: a) written notice to the purchaser that coordination is required before the equipment is operated; b) coordination with the licensee; c) use of FCC-certified equipment; and d) written notice of consent.¹² The essence of these proposals is that boosters can have significant positive benefits to both CMRS and Part 90 users when they are installed and maintained by professionals who have the requisite technical knowledge to coordinate with licensees and prevent interference with a licensee's operations. As the DAS Forum noted in its petition, "coordination has always been presumed by the industry to constitute carrier consent to operate the DAS installation. Thus, whether consent of the carrier is formal or informal, reputable installers and operators do not activate DAS systems without some

¹¹ DAS Forum Petition at 3-4.

¹² See Bird Technologies Petition at 9-10; Jack Daniel Petition at 3.

degree of carrier participation to ensure that no harmful interference will result.”¹³ While the DAS Forum believes its Code of Conduct best furthers these goals, it is encouraged by the efforts of Bird Technologies and Jack Daniel.

The CTIA petition similarly seeks to prevent harmful interference, but goes beyond mere coordination and, as a result, risks stifling the sale and marketing of needed repeaters. CTIA asserts that “the Commission should affirmatively declare that the unauthorized sale and use of wireless boosters and repeaters is unlawful.”¹⁴ Under CTIA’s proposal, the “authorizing” body would be solely within the scope of wireless licensees.¹⁵ As noted by The DAS Forum in its petition, “it would be virtually impossible to require advance consent from multiple carriers serving the community in which a DAS repeater was to be installed, where not all carriers will necessarily be targeted for interconnection.”¹⁶ In effect, the CTIA proposal would give CMRS carriers a stranglehold over the entire booster and repeater industry because every sale and installation would require licensee pre-approval. The transaction costs and time delays associated with this model would discourage future investment in DAS equipment, just as more

¹³ DAS Forum Petition at 5. AT&T has responded to the Wilson Petition in a letter to the Chief of the Enforcement Bureau. See letter from M. Robert Sutherland, Counsel for AT&T, Inc., to P. Michele Ellison, Chief, Enforcement Bureau, WT Docket No. 10-4 (Feb. 2, 2010). In its letter, AT&T cites Enforcement Bureau letters that interpret Section 22.383 of the Commission's rules to prohibit installation and use of in-building repeaters by parties other than licensees. We observe that Section 22.383, adopted in 1994, was intended to apply to “public mobile services” and specifically, paging. See Revision of Part 22 of the Commission's Rules Governing the Public Mobile Services, CC Docket No. 92-115, *Report and Order*, 9 FCC Rcd. 6513, 6559-6560 (1994). Apparently questions had arisen whether licensees in the public mobile radio services could install in-building repeaters without further authorization from the FCC. It is not clear that the rule has any independent application to cellular services where licensees may install transmitters anywhere within their service area. Moreover, it should be noted that the rule simply permits licensees to install in-building radiation systems; it does not, in fact, prohibit others from doing so. In the cellular service, installation of repeater systems prior to coordination is obviously necessary, commonplace, and often without prior consent of the licensee. It is the subsequent consent during a coordination process that constitutes the licensee’s consent. We note that in none of the cases cited by AT&T was there any suggestion that the use of the repeaters had been coordinated with the carrier.

¹⁴ CTIA Petition at 14.

¹⁵ *Id.* at 12.

¹⁶ DAS Forum at 4.

and more Americans are turning to wireless broadband.¹⁷ The DAS Forum understands the carriers' desire to protect their networks from interference, but believes its Code of Conduct will satisfy these needs. The DAS Forum stands ready to work cooperatively with carriers towards minimizing interference concerns.

IV. CONCLUSION

Commission regulation of wireless repeaters should further the overarching policy goals of wireless deployment through a vibrant private-sector spirit of innovation, of which DAS is an essential element.¹⁸ The DAS Forum respectfully urges the Commission to initiate a rulemaking to obtain public comment on the issues discussed herein and incorporate the Industry Code of Conduct in any regulations developed in such a proceeding.

Respectfully Submitted

_____/s/_____

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¹⁷ DAS can be an effective method for ensuring wireless coverage and services in areas that cannot be covered through traditional macro-sites or suffer from capacity constraints. It facilitates wireless broadband in previously underserved areas, and makes wireless broadband service truly competitive with traditional wireline broadband.

¹⁸ *Fostering Innovation and Investment in the Wireless Communications Market; A National Broadband Plan for Our Future*; GN Docket Nos. 09-157; 09-51, *Notice of Inquiry*, FCC 09-66 (rel. Aug. 27, 2009) at ¶ 1 (“We seek to understand better the factors that encourage innovation and investment in wireless and to identify concrete steps the Commission can take to support and encourage further innovation and investment in this area.”).

Appendix A

Part 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Amend § 2.815 by adding new paragraph (c) to read as follows:

(c) Every grant of equipment certification for a booster/repeater to be used in any of the wireless radio services must contain the following condition for operation stated on the face of the grant: “This device may not be operated until the user/installer has coordinated with the licensee of the radio service on which the device is designed to operate in accordance with the Code of Conduct set forth in Section 2.815(c) of the Commission’s rules.” The Code of Conduct required for such coordination is set forth as follows:

A. The sale of a booster/repeater (“equipment”) shall be accompanied by a notice stating that it is the responsibility of the owner/installer to coordinate with the appropriate local carrier(s) prior to operation in order to avoid harmful interference.

B. As part of the coordination process, the owner/installer of the equipment shall provide the carrier(s) with the FCC certification number or other information concerning the technical characteristics of the equipment and its location sufficient to demonstrate, by testing or otherwise, that it is unlikely to cause interference.

C. Coordination with the carrier(s) showing no likelihood of harmful interference shall be considered licensee consent to operate the equipment. The carrier(s) shall notify the owner/installer of the equipment in writing or by e-mail that the

coordination has been successfully concluded. Such notification shall not be unreasonably withheld.

D. If at any time, the equipment is found to cause harmful interference, it shall be the responsibility of the owner to take whatever steps are required to eliminate the interference.